



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,091	06/30/2000	David L Deitz	06005/36803	1769

7590

09/02/2003

Marshall O'Toole Gerstein Murray & Borun
6300 Sears Tower
233 South Wacker Drive
Chicago, IL 60606-6402

EXAMINER

ALI, SYED J

ART UNIT

PAPER NUMBER

2127

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/609,091

Applicant(s)

DEITZ ET AL.

Examiner

Syed J Ali

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1, 23, 29, 39-40, and 42-46 are objected to because of the following informalities:

As per claim 1, in line 11, the following limitation is recited: "...information to be included within a least one batch...", which appears to be a typographical error. Appropriate correction is required.

As per claims 23, 29 and 45, there are no periods at the end of the claims. Appropriate correction is required.

As per claims 39-40, and 42-46, the referenced parent claims appear to be typographical errors. Specifically, it is Examiner's opinion that claims 39-40 appear as though they should depend from claim 36, rather than claim 34, and that claims 42-43 should depend from claim 41, rather than claim 40. Claims 44-46 are objected to for being dependent upon claims that reference improper parent claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2127

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 8, 10-13, 17, 41-44, 47-78, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al. (USPN 6,292,708) (hereinafter Allen). in view of Bender et al. (USPN 5,576,946) (hereinafter Bender).

As per claim 1, Allen discloses a method of creating a batch process campaign including a plurality of batches for use in a process control system having a batch creation function in communication with a database containing batch information, the method comprising the steps of:

 sending a first message requesting batch information to the batch creation function (col. 7 lines 10-30, "master control module 204 is configured to download setup data...in response to the initiation of the wafer processing procedure");

 receiving a second message containing a set of batch information in response to the first message requesting batch information (col. 7 lines 10-30, "master control module 204 is preferably configured to monitor status of wafers within wafer processing system 100; master control module may periodically request and receive status data from application control modules 202 to facilitate such monitoring");

 prompting a user to enter a first input identifying a subset of the set of batch information from the set of batch information to be included within a least one batch from the plurality of batches (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for recipe management and selection");

Art Unit: 2127

prompting the user to enter a second input specifying campaign information to be included within the batch process campaign (col. 11 line 57 - col. 12 line 6, “Preferably in response to an operator input, task 504 causes master control module 204 to select a plurality of processing recipes for the next wafer processing procedure to be performed by wafer processing system 100”); and

using the first and second inputs to create the batch process campaign (col. 9 lines 4-17, “In response to a user input, master control module 204 may select a plurality of processing recipes for use with the current batch of wafers”).

Bender discloses the following limitations not shown by Kline, specifically that the batch creation function is in communication with a graphical user interface, wherein the method further comprises the steps of:

displaying the set of batch information using the graphical user interface (col. 7 lines 25-3, “The Run Module further provides an overview screen that displays for the operator the instantaneous status of all equipment, the current process variables in use, and the current location of the program in the overall program sequence”);

It would have been obvious to one of ordinary skill in the art to combine Allen and Bender since whereas Allen does specify an interface for the operator to use for monitoring and specifying recipe parameters (Fig. 4 element 412), Allen does not specifically disclose the type of interface that is used. It could be interpreted as a command line interface, which is not necessarily the easiest way of monitoring batch production. To that end, utilizing the graphical user interface of Bender allows an intuitive way of monitoring the process, as well as specifying

Art Unit: 2127

changes in parameters. Furthermore, various menus and display types could be implemented, greatly increasing the scalability and usability of the production process.

As per claim 2, Allen discloses the method of claim 1, wherein the step of sending the first message requesting batch information includes the step of requesting recipe information (col. 7 lines 10-30, “master control module 204 is configured to download setup data, e.g., processing recipes”).

As per claim 3, Allen discloses the method of claim 2, wherein the step of requesting the recipe information includes the step of requesting recipe information associated with a setup batch (col. 7 lines 10-30, “master control module 204 is configured to download setup data, e.g., processing recipes, to application control modules 202 in response to the initiation of the wafer processing procedure”).

As per claim 4, Allen discloses the method of claim 2, wherein the step of requesting the recipe information includes the step of requesting recipe information associated with a cleanup batch (col. 4 lines 55-67, “Cleaning station 108 may employ a number of timing and staging mechanisms to ensure that the wafers travel through cleaning station 108 in a regulated manner”, wherein each batch is subjected to a cleaning stage, ensuring that there is no contamination from previous batches affecting the production of subsequent batches).

As per claim 8, Allen discloses the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign includes the step of prompting the user to specify a parameter value associated with a process step (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for recipe management and selection, alarm and error management, diagnostics, calibration and setup, and the starting, stopping, and pausing of wafer processing system 100", wherein the MMI module is capable of setting or changing any number of parameters associated with various process steps of the batch production).

As per claims 10-13 and 17, Allen discloses a system comprising a computer readable medium (Fig. 4) and a plurality of routines stored on the computer readable medium adapted to be executed by a processor (col. 6 line 62 - col. 7 line 9, "each application control module 202 controls the operation of at least one sub-procedure"), wherein the system performs the method of claims 1-4 and 8, respectively. Furthermore, the remainder of the limitations in claims 10-13 and 17 mirror those of claims 1-4 and 8, respectively. Therefore, the discussion of those claims presented above form the basis for rejection of the present claims as well.

As per claim 41, Allen discloses a batch process campaign management system for use in a process control system, comprising:

a batch executive (col. 6 line 62 - col. 7 line 9, "The function of the various processing stations may be controlled by application control modules 202"); and

Art Unit: 2127

a campaign manager communicatively coupled to the batch executive that exchanges messages with the batch executive (col. 7 lines 10-19, "Control system 200 also includes an autonomous master control module 204, which is preferably configured to communicate with and regulate the operation of each application control module 202"), wherein the messages contain batch-related information (col. 7 lines 10-19, "master control module may periodically request and receive status data from application control modules") and campaign-related information generated by the campaign manager in response to a user input (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for...wafer processing system 100").

Bender discloses the following limitations not shown by Allen, specifically that a batch information database exists (col. 5 lines 46-57, "The present invention uses industry standard database formats"); and

the messages contain batch-related information from the batch information database (col. 5 lines 46-57, "Each step may consist of one or more actions, with associated variable parameters [time, pressure, temperature, flow rate, etc.] and constants. Each step comprises, therefore, a database in itself").

As per claim 42, Allen discloses the system of claim 41, wherein the batch executive further includes a batch definition/instantiation function (col. 7 line 50 - col. 8 line 3, "In response to various inputs, MMI module 206 may be responsible for recipe management...and the starting...of wafer processing system") and a batch execution engine (this is inherent in the

Art Unit: 2127

disclosure of Allen, in that once the recipe has been defined and the production is started, the batch is executed).

As per claim 43, Bender discloses the system of claim 41, further comprising a graphical user interface that is communicatively coupled to the campaign manager (col. 7 lines 25-3, "The Run Module further provides an overview screen that displays for the operator the instantaneous status of all equipment, the current process variables in use, and the current location of the program in the overall program sequence"), and wherein the campaign manager includes a campaign creation function, a campaign execution function and a campaign editing function (col. 7 line 50 - col. 8 line 3, wherein all of these functions are controlled by the MMI module).

As per claim 44, Bender discloses the system of claim 43, wherein the campaign creation function displays batch information using the graphical user interface and the messages containing batch-related information (col. 7 lines 25-3, "The Run Module further provides an overview screen that displays for the operator the instantaneous status of all equipment, the current process variables in use, and the current location of the program in the overall program sequence").

As per claim 47, Allen discloses the system of claim 41, wherein the batch-related information includes recipe information (col. 7 lines 10-30, "master control module 204 is configured to download setup data, e.g., processing recipes").

Art Unit: 2127

As per claim 48, Allen discloses system of claim 41, wherein the batch-related information includes parameters associated with process steps (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for recipe management and selection, alarm and error management, diagnostics, calibration and setup, and the starting, stopping, and pausing of wafer processing system 100", wherein the MMI module is capable of setting or changing any number of parameters associated with various process steps of the batch production).

As per claim 50, Bender discloses the system of claim 41, wherein the campaign manager automatically sends messages to a batch historian that maintains historical campaign information and a security system that controls user access (col. 10 lines 38-51, "In the illustrated embodiment the trend screen displays the current trend, or time history, of three selected process variables, which in this case are inlet temperature, fan load and inlet humidity. Each variable is displayed with its setpoint, current value, and recent history").

4. Claims 5, 14, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Bender in view of Asano et al. (USPN 6,000,830) (hereinafter Asano)

As per claim 5, Asano discloses the following limitation not shown by the modified Allen, specifically the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign

Art Unit: 2127

includes the step of prompting the user to specify a batch execution mode (col. 5 lines 24-35, “This system is designed to select the apparatus mode, the recipe management mode, or the host mode. This mode selection is performed by, for example, the mode selector 24 of the apparatus controller M or the mode selector 44 of the host computer”).

It would have been obvious to one of ordinary skill in the art to combine the modified Allen with Asano since the specification of various modes of execution allows the same system to perform various types of tasks. This not only allows the operator of the system to indicate the most appropriate mode of execution at execution time, but it also allows the designers of the system to increase the scalability of the system to meet multiple goals, since the system is capable of switching between various types of jobs.

As per claim 14, it is rejected for similar reasons as discussed above for claim 5.

As per claim 49, Asano discloses the system of claim 41, wherein the campaign-related information includes a batch execution mode (col. 5 lines 24-35, “This system is designed to select the apparatus mode, the recipe management mode, or the host mode. This mode selection is performed by, for example, the mode selector 24 of the apparatus controller M or the mode selector 44 of the host computer”).

5. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Bender in view of Hohkibara et al. (USPN 6,438,436) (hereinafter Hohkibara).

Art Unit: 2127

As per claim 6, Hohkibara discloses the following limitations not shown by the modified Allen, specifically the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign includes the step of prompting the user to specify a maximum number of active batches (col. 2 line 65 - col. 3 line 7, "it is highly desirable to charge the processing machine with the maximum number of lots that are allowed to be set in the machine, so as to improve the performance or efficiency of the machine", wherein the citation refers to prior art that teaches of indicating a maximum number of active lots that are possible for the production system to process).

It would have been obvious to one of ordinary skill in the art to combine the modified Allen with Hohkibara since it would allow the user to specify a threshold that ensures that the system does not exceed its capabilities. For example, if some sort of error were to occur during the manufacturing process, specifying a maximum number of batches to produce would ensure that a large number of batches are not defective. This would allow user intervention at a point where recovery could occur early enough that the problem does not cause undue waste of resources.

As per claim 16, it is rejected for similar reasons as discussed above for claim 6.

6. Claims 7, 9, 15, 18, and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Bender in view of Sargent (USPN 5,113,350).

As per claim 7, Sargent discloses the following limitation not shown by the modified Allen, specifically the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included with the batch process campaign includes the step of prompting the user to specify a number of batches within the batch process campaign (col. 3 lines 39-60, "the display row 50 begins a scrolling operation and sequentially displays the... number of batches which will be required to make up the load and the name of the customer who is to receive the load. As the operation progresses the operator is able to verify that he has entered the correct number").

It would have been obvious to one of ordinary skill in the art to combine the modified Allen with Sargent since automating the process of batch production to the point where there is no control over the number of batches may cause a waste in resources. Specifically, if only a few batches need to be produced, but the system is automated such that hundreds of batches are produced at a time, the excess may be wasted. By allowing the user to specify the number of batches as suggested by Sargent, the system can make most efficient use of resources by only producing the number of batches necessary. Further, this concept is easily adapted to the disclosure of Allen, as the step of inputting the number of batches to create could also be controlled by the MMI module of Allen (col. 7).

As per claim 9, Sargent discloses the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign includes the step of prompting the user to specify batch identification information (col. 3 lines 39-60, "the display row 50 begins a scrolling operation and sequentially

Art Unit: 2127

displays the load number entered by the operator”, wherein the load number identifies the specific batch).

As per claims 15 and 18, they are rejected for similar reasons as discussed above for claims 7 and 9, respectively.

As per claim 45, Sargent discloses the system of claim 44, wherein the campaign creation function processes user inputs identifying a set of the displayed batch information to be included within a batch process campaign (col. 3 lines 39-60, “the display row 50 begins a scrolling operation and sequentially displays the load number entered by the operator”, wherein the load number identifies the specific batch).

As per claim 46, Allen discloses the system of claim 45, wherein the batch process campaign includes multiple types of batches (col. 6 line 62- col. 7 line 9, “It should be appreciated that each processing station may be associated with more than one sub-procedure and/or governed by more than one processing recipe”).

7. Claims 19-23 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano in view of Allen.

As per claim 19, Asano discloses a method of executing a batch process campaign including a plurality of batches for use in a process control system having a batch execution function, the method comprising the steps of:

determining a batch execution mode associated with the process campaign (col. 5 lines 24-35, "This system is designed to select the apparatus mode, the recipe management mode, or the host mode. This mode selection is performed by, for example, the mode selector 24 of the apparatus controller M or the mode selector 44 of the host computer");

releasing one or more batches from the plurality of batches to the batch execution function based on the batch execution mode (col. 8 lines 22-37, "When the operator designates the start button on the recipe edition window after the recipe edition is completed, the pop-up window of 'normal mode' shown in Fig. 15 is displayed. On this 'normal mode' window, the operator can designate a procedure for processing an object to be processed, i.e., a semiconductor wafer").

Allen discloses the following limitation not shown by Asano, specifically sending messages to the batch execution function to cause the batch execution function to execute one or more of the released batches (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for...starting, stopping, and pausing of wafer processing system 100").

It would have been obvious to one of ordinary skill in the art to combine Asano and Allen since the specification of various types of execution modes allows the system to be capable of performing multiple types of tasks, depending on the particular situation. Furthermore, requiring

Art Unit: 2127

that the execution be started by a user input allows human intervention, thereby exhibiting a greater degree of control over the system.

As per claim 20, Allen discloses the method of claim 19, wherein the step of releasing the one or more batches from the plurality of batches to the batch execution function based on the batch execution mode includes the step of releasing a ready batch prior to the complete execution of a currently executing batch (col. 4 lines 38-54m After a batch of polished wafers has been deposited into unload cups 122, index table 120 rotates and the carrier elements 123 are again lowered to receive a new set of wafers from load cups 118 for polishing”, wherein the next batch is loaded for processing as the previous batch is being completed).

As per claim 21, the combination of Asano and Allen discloses the method of claim 19, wherein the step of sending the messages to the batch execution function to cause the batch execution function to execute the one or more of the released batches includes the step of sending a message to cause the batch execution function to execute the one or more released batches according to the batch execution mode (col. 7 line 50 - col. 8 line 3, “In response to various user inputs, MMI module 206 may be responsible for...diagnostics, calibration and setup”, wherein the inputting of various diagnostic and setup information could be done in accordance with selection of an execution mode, as suggested by Asano).

As per claim 22, Allen discloses the method of claim 19, wherein the step of sending the messages to the batch execution function to cause the batch execution function to execute the

Art Unit: 2127

one or more of the released batches includes the step of sending a message specifying a parameter value associated with a process step associated with the one or more of the released batches step (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for recipe management and selection, alarm and error management, diagnostics, calibration and setup, and the starting, stopping, and pausing of wafer processing system 100", wherein the MMI module is capable of setting or changing any number of parameters associated with various process steps of the batch production).

As per claim 23, Allen discloses the method of claim 19, wherein the step of sending the messages to the batch execution function to cause the batch execution function to execute the one or more of the released batches includes the step of sending a message specifying a recipe associated with the one or more of the released batches step (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for recipe management and selection, alarm and error management, diagnostics, calibration and setup, and the starting, stopping, and pausing of wafer processing system 100", wherein the MMI module is capable of setting or changing any number of parameters associated with various process steps of the batch production).

As per claims 25-29, Allen discloses a system comprising a computer readable medium (Fig. 4) and a plurality of routines stored on the computer readable medium adapted to be executed by a processor (col. 6 line 62 - col. 7 line 9, "each application control module 202 controls the operation of at least one sub-procedure"), wherein the system performs the method

of claims 19-23, respectively. Furthermore, the remainder of the limitations in claims 25-29 mirrors those of claims 19-23, respectively. Therefore, the discussion of those claims presented above form the basis for rejection of the present claims as well.

8. Claims 24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano in view of Allen in view of Hohkibara.

As per claim 24, Hohkibara discloses the following limitation not shown by the modified Asano, specifically the method of claim 19, wherein the step of releasing the one or more batches from the plurality of batches to the batch execution function based on the batch execution mode includes the step of releasing the one or more batches from the plurality of batches according to a user specified maximum number of active batches (col. 2 line 65 - col. 3 line 7, "it is highly desirable to charge the processing machine with the maximum number of lots that are allowed to be set in the machine, so as to improve the performance or efficiency of the machine", wherein the citation refers to prior art that teaches of indicating a maximum number of active lots that are possible for the production system to process).

It would have been obvious to one of ordinary skill in the art to combine the modified Allen with Hohkibara since it would allow the user to specify a threshold that ensures that the system does not exceed its capabilities. For example, if some sort of error were to occur during the manufacturing process, specifying a maximum number of batches to produce would ensure that a large number of batches are not defective. This would allow user intervention at a point

Art Unit: 2127

where recovery could occur early enough that the problem does not cause undue waste of resources.

As per claim 30, it is rejected for similar reasons as discussed above for claim 24.

9. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sargent in view of Bender.

As per claim 31, Sargent discloses a method of editing a batch process campaign including a plurality of batches for use in a process control system having a data store, the method comprising the steps of:

prompting a user to enter a first input identifying one or more unreleased batches from the batch process campaign (col. 3 lines 39-60, "By means of the keyboard 20, the operator enters the number of the load which is to be prepared", wherein the load number identifies the specific batch);

prompting the user to enter a second input specifying a change to batch information associated with the identified one or more unreleased batches (col. 3 lines 39-60, "If the verification process shown an error in the entry, the operator clears the keyboard and repeats the procedure", wherein the operator can change information associated with the batch to rectify the error); and

storing the change to the batch information together with the batch process campaign in the data store (col. 3 lines 39-60, "From information stored in the computer and processed

Art Unit: 2127

through the central processor unit the display row 50 begins a scrolling operation and sequentially displays...”, wherein once the operator changes the information in accordance with the above citation, the information stored in the computer is updated).

Bender discloses the following limitation not shown by Sargent, specifically that the user interface is a graphical user interface (col. 7 lines 25-3, “The Run Module further provides an overview screen that displays for the operator the instantaneous status of all equipment, the current process variables in use, and the current location of the program in the overall program sequence”).

It would have been obvious to one of ordinary skill in the art to combine Sargent and Bender since whereas Sargent does specify an interface for the operator to use for monitoring and specifying parameters (Fig. 2 element 18), Sargent discloses a more rudimentary interface. To that end, utilizing the graphical user interface of Bender allows an intuitive way of monitoring the process, as well as specifying changes in parameters. Furthermore, various menus and display types could be implemented, greatly increasing the scalability and usability of the production process..

As per claim 32, Sargent discloses the method of claim 31, wherein the step of prompting the user to enter the second input via the graphical user interface specifying the change to batch information associated with the identified one or more unreleased batches includes the step of prompting the user to enter the second input while the batch process campaign is executing (col. 3 lines 29-69, “As the operation progresses the operator is able to verify that he has entered the correct number. Further verification that the information being retrieved is correct is provided

Art Unit: 2127

by comparison of the displayed customer's name to the customer's name which appears on the written information provided to the operator").

10. Claims 33-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sargent in view of Bender in view of Allen.

As per claim 33, Allen discloses the following limitation not shown by the modified Sargent, specifically the method of claim 31, wherein the step of prompting the user to enter the second input via the graphical user interface specifying the change to the batch information associated with the identified one or more unreleased batches includes the step of prompting the user to enter an input specifying a recipe change to the batch information (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for recipe management", wherein the changing of various parameters during batch execution could be modified such that the recipe is changed in accordance with the disclosure of Allen).

It would have been obvious to one of ordinary skill in the art to combine the modified Sargent with Allen since changing the recipe of the batch would allow the production to be altered if an error was detected. Rather than allowing the production to continue knowing that an error had occurred, the process could be stopped and rectified before the entire batch is ruined.

As per claim 34, Allen discloses the method of claim 31, wherein the step of prompting the user to enter the first input via the graphical user interface specifying the change to the batch information associated with the identified one or more unreleased batches includes the step of

Art Unit: 2127

prompting the user to enter an input specifying a parameter value change (col. 7 line 50 - col. 8 line 3, "In response to various user inputs, MMI module 206 may be responsible for recipe management and selection, alarm and error management, diagnostics, calibration and setup, and the starting, stopping, and pausing of wafer processing system 100", wherein the MMI module is capable of setting or changing any number of parameters associated with various process steps of the batch production).

As per claim 35, Allen discloses the method of claim 31, wherein the step of prompting the user to enter the second input via the graphical user interface specifying the change to the batch information associated with the identified one or more unreleased batches includes the step of prompting the user to enter an input specifying an additional batch to be added to the batch process campaign (col. 4 lines 38-67, wherein multiple batches are concurrently being executed, and changes may be made to a subsequent batch in accordance with Sargent's method of changing the parameters mid-batch, and the MMI module of Allen).

As per claims 36-40, Allen discloses a system comprising a computer readable medium (Fig. 4) and a plurality of routines stored on the computer readable medium adapted to be executed by a processor (col. 6 line 62 - col. 7 line 9, "each application control module 202 controls the operation of at least one sub-procedure"), wherein the system performs the method of claims 31-35, respectively. Furthermore, the remainder of the limitations in claims 36-40 mirrors those of claims 31-35, respectively. Therefore, the discussion of those claims presented above form the basis for rejection of the present claims as well.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

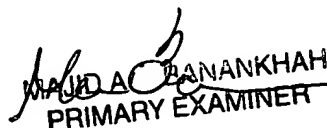
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J Ali whose telephone number is (703) 305-8106. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A Grant can be reached on (703) 308-1108. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Syed Ali
August 21, 2003



MAJID A. BANANKHAH
PRIMARY EXAMINER